

REMARKS

Applicant cancels claims 1-7 without prejudice. As mentioned in the prior office action response in the election/restriction, the Applicant reserves the right to pursue the cancelled claims through a divisional application.

Application No. 10/023,011
Preliminary Amendment dated July 9, 2003
Reply to Office Action of April 9, 2003

REMARKS

The Applicant faxed the drawings to the Examiner on April 21, 2003, and will await approval of the amended drawings.

Remarks

Claim Rejections - 35 U.S.C. § 112

The Examiner has rejected claims 1-23 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Examiner has rejected independent claims 8, 13 and 20 because they have misdescriptive language concerning the coating and “abutting” language. The Applicant has amended the claims to more particularly point out and distinctly claim the subject matter.

Claim Rejections - 35 U.S.C. § 102 and 103

The Examiner has rejected claims 8-10 under 35 USC 102(b) as being anticipated by either Gregory (U.S. Patent No. 4,858,073) or Novotny et al. (U.S. Patent No. 6,462,410).

The Examiner states that Gregory teaches in Figure 2 the elements of claims 8-10. In particular, the Examiner states that Figure 2 of Gregory teaches an organic plastic coating 41 on a spreader 34. The Applicant respectfully traverses. Gregory does not teach the elements of independent claim 8, as follows:

8. *A heat spreader for an IC circuit package, comprising:*

a thermally conductive heat spreader body having a first surface thermally coupled to an IC die; and

a coating of organic surface protectant on the first surface and wherein the coating directly abuts the IC die.

Specifically, Gregory does not teach a coating of organic surface protectant (OSP) on a heat spreader or wherein the OSP coating directly abuts the IC die. In contrast, the organic plastic coating 41 of Gregory, as shown in Figure 2, is on the heat sink 34 and not on the heat spreader 36. Additionally, the organic plastic coating 41 does not directly abut the IC die 20. Instead, the organic plastic coating 41 of Gregory abuts a heat sink 34 and a polyamide film 40.

Also, the Examiner states that Novotny shows coated spreader 122 as claimed. The Applicant respectfully traverses. Novotny does not teach the elements of independent claim 8. In contrast, Novotny teaches an optional plastic coating on a heat sink 122, and not a heat spreader. Additionally, because the optional plastic coating would be on the heat sink 122, and not on the heat dissipation structure 118 that optionally includes a heat spreader, the

optional plastic coating does not abut the IC die 114 that is within the heat dissipation structure 118.

Therefore, the Applicant respectfully submits that neither Gregory nor Novotny anticipate independent claim 8, or claims 9 and 10 that depend on claim 8 and thus incorporate its elements.

The Examiner has rejected claims 12-17, 19 and 20-23 under 35 USC 103(a) as being unpatentable over Gregory ('073) or Novotny et al. ('410). The Examiner has rejected claims 11 and 18 under 35 USC 103(a) as being unpatentable over either Gregory ('073) or Novotny et al. ('410) taken with either the Solberg "Impact" publication or the Kester OSP Coating 2001 publication. The Applicant respectfully traverses. The references individually and in combination fail to teach or render obvious all elements of the claims. As described above in relation to the 35 USC 102(b) rejection of claims 8-10, both Gregory and Novotny fail to teach the elements of independent claim 8. Independent claims 13 and 20 contain the same elements of claim 8 that both Gregory and Novotny failed to teach. Additionally, Solberg and Kester fail to teach these elements. Dependent claims 12, 14-17, 19, and 21-23 depend from independent claims 8, 13, and 20 and therefore incorporate the limitations of those claims. Therefore, the Applicant respectfully submits that claims 12-17, 19 and 20-23 are not obvious in light of Gregory or Novotny taken with either Solberg or Kester.

If there are any additional charges, please charge Deposit Account No. 02-2666.

Respectfully submitted,

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